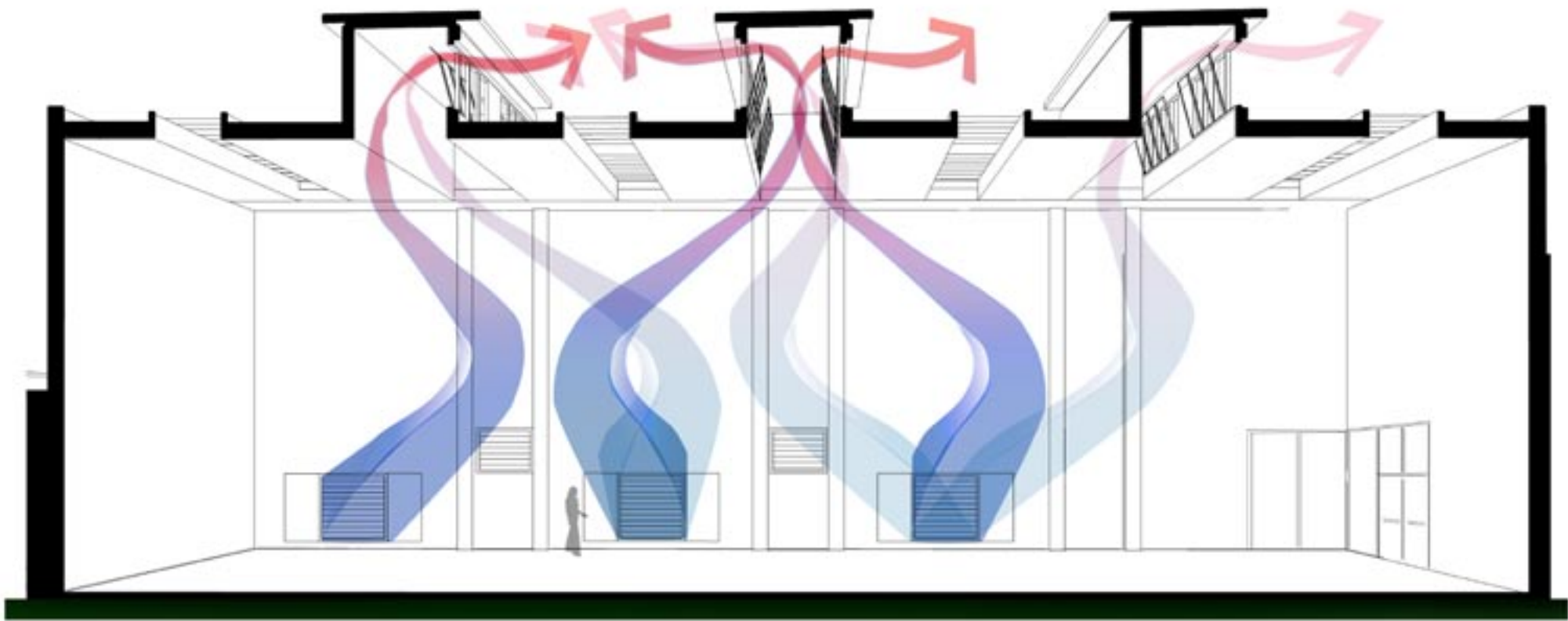


GYMNASIUM:

Saving Energy with Sunlight



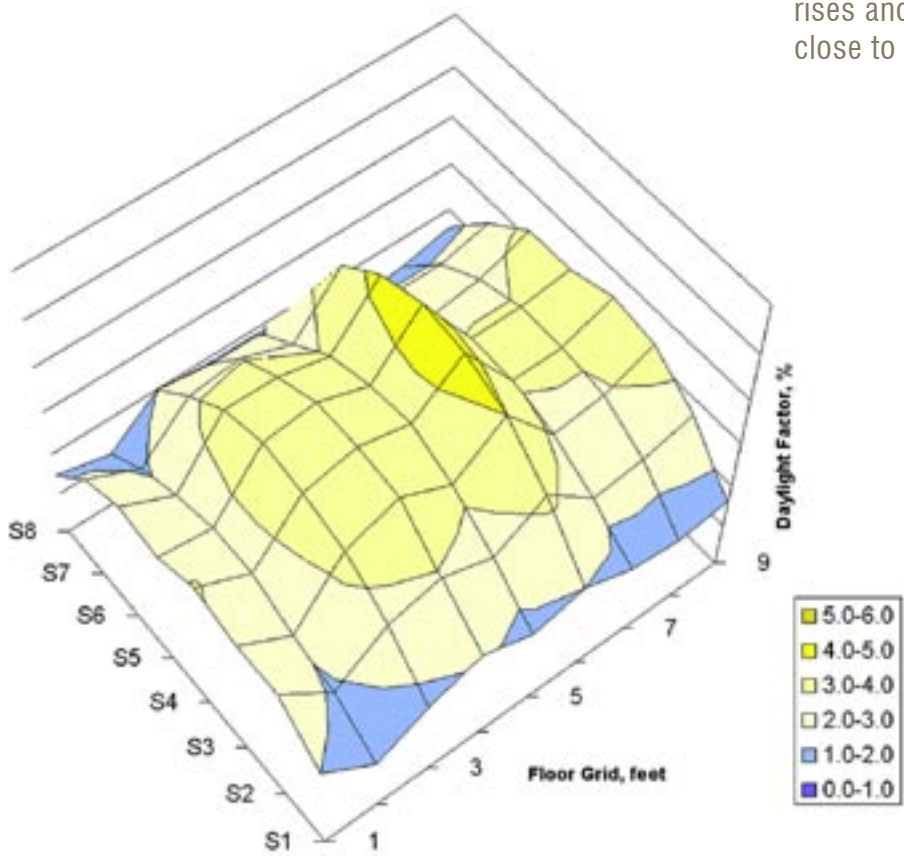
YESLER COMMUNITY CENTER



Mithun®

* The Gymnasium:

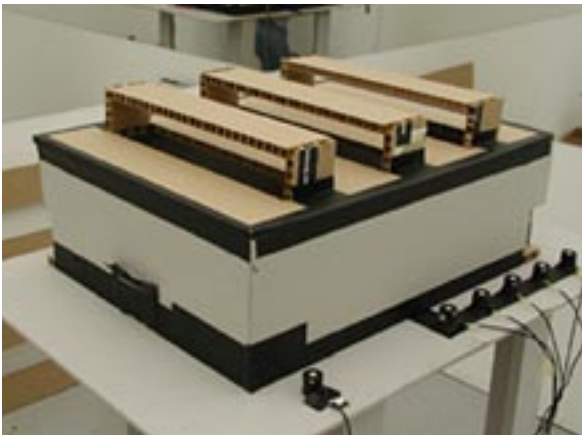
Doors at the floor level open to provide cross ventilation and cool air. The air warms, rises and then escapes through roof monitors. High motorized windows open and close to provide stack ventilation.



This daylight graph shows how bright the gym is without electric lights. Its shape reflects the openings in the roof.

The benefits of a naturally lit gym are visual quality and tremendous energy savings.

The different colors on the legend represent the ratio of indoor brightness to outdoor brightness on an overcast day. For example, a measurement of 4 means that the light level inside is 4% of the light level outside. This “daylight factor” is appropriate for the room and gives a good idea of how bright it is outside and how little light we need inside!



Building Model in the Daylighting Laboratory

Model Testing Design Options Daylighting Laboratory:

An integrated design combines daylight and natural ventilation into one skylight system. Even on a cloudy February afternoon, the gym is equally bright with lights on or off.

Saving Energy:

For optimum ventilation, motors open windows that are too high to reach.



Moving air:

Gym vent doors open without motors in warm weather.



Sustainably harvested wood:

Maple wood for the floor was harvested from responsibly managed forests certified by the Forest Stewardship Council.



Natural Cooling:

Six large louvers on the east and west walls create cross ventilation and stack ventilation to cool the gym in the summer. Exterior louvers allow air inlets to be left open at night when stack ventilation is most effective.

Harvesting the Sun:

Fluorescent lights with dimming ballasts save energy as they automatically adjust to increasing sunshine during the day. When the sun is really bright, turn lights off to save the most energy!

Daylighting:

Skylights and roof monitors are positioned to light the entire gym floor naturally without bright shafts of sunlight that would bother players looking up for a ball.

USER TIPS:

If the room seems bright enough without the lights – turn them off. This is the biggest step to save energy.

If you’re hot or stuffy...

Open the six air louvers on the walls. Check with staff if they are locked.